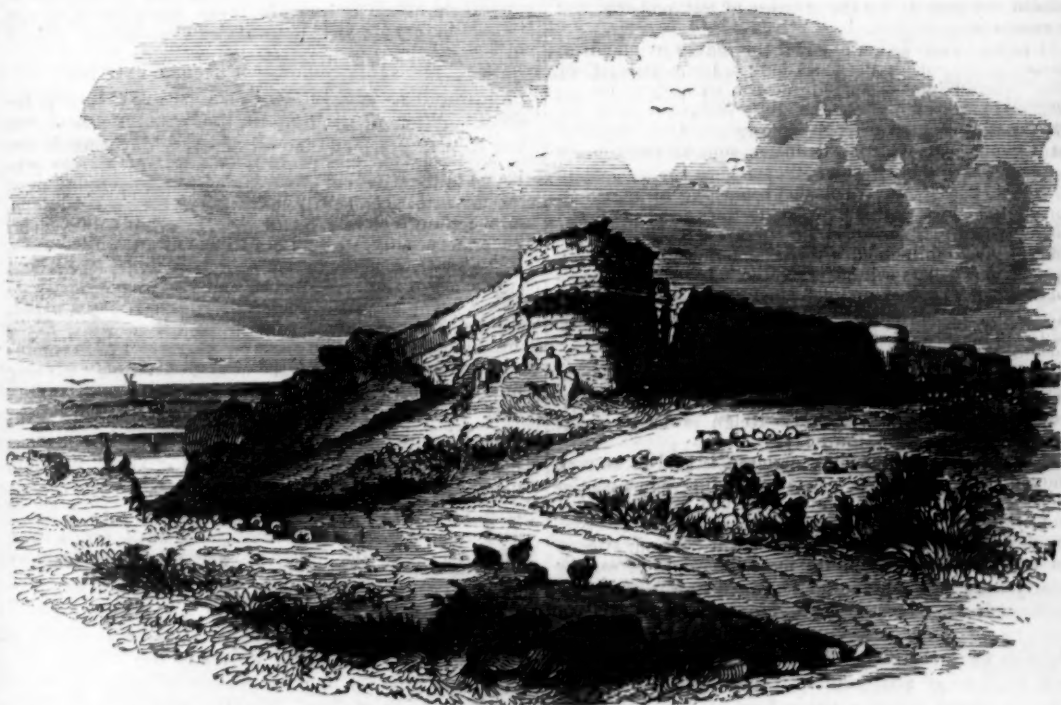




BURGH CASTLE.



REMAINS OF THE ROMAN FORTRESS AT BURGH, SUFFOLK.

RESPECTING the situation of the ancient *Garianonum* of the Romans, a station so called from its commanding the mouth of the river Gerionus, or Yare, our most learned antiquarians have differed in opinion; some endeavouring to fix it at Caister, a place in Norfolk four miles distant. A recent and local writer, however, from whom we mainly draw the following account, so entirely proves its identity with that of Burgh Castle, in Suffolk, represented in the engraving, as to set the matter beyond all question. Judging of these gigantic remains merely from their external evidence, we are at a loss to conceive how any doubts could arise as to their purpose and importance. These doubts, however, are entirely attributable to the circumstance of Burgh Castle being now found about three miles inland, a situation incompatible with the ancient *Garianonum* as a place of command and strength, and with the judicious policy always displayed by the Romans in the position of their important strongholds; but which discrepancies are fairly and fully solved by the changes which this part of the country has undergone during the eighteen centuries which have elapsed since the Roman advent in Britain. In the present day Burgh Castle is found standing on a rising ground, with the river Waveney at its feet, and near the junction of this river with the Yare, (both unimportant streams, insufficient for the navigation of large vessels,) and overlooking on the west side an extent of marsh land, four miles across, which reaches in a gradually decreasing breadth to the ancient city

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of Norwich, a distance of above twenty miles. From every species of local form and evidence, corroborated by the voice of history and tradition, it appears that these two small rivers are the slender remains of a mighty estuary, or arm of the sea, which, at the time of the Roman Conquest, covered these marshes, and thus divided a considerable length of Norfolk from Suffolk. Such being the state of the principal entrance into the territory of the warlike Iceni, we find *Garianonum* placed on the most conspicuous point of land on its southern shore, and thus commanding the German Ocean, the estuary of the Yare, and the interior country, this impregnable fortress was admirably calculated for those purposes of offence and defence which the disciplined conquerors were obliged unremittingly to observe towards an untamed and ever alert people.

As a further proof of the nearer approach of the sea or estuary of the Yare to this station, than is now exhibited, we may mention that, in the surrounding marshes, and even immediately at the walls of *Garianonum*, are found anchors, rings, and other pieces of iron, which, however uncouth, could only have served for maritime purposes, and must be the relics, either of the vessels belonging to the Roman garrison, or of the navigators or pirates, who in early times visited this dangerous coast.

About the year of our Lord 1040, "and long before," as an old MS. reports, the retreat of the sea became evident, from the appearance of a bank of

sand in the centre of the mouth of the estuary, by which the waters were divided into two distinct channels, and on this sand the town of Great Yarmouth was founded. At this present time all traces of the northern channel are obliterated; Yarmouth, except in periods of high tides, is divided from the sea by an extent of sand-shore of about a quarter of a mile in extent, called the North and South Dunes; on the north and west by flat marshes still subject to inundations, and the southern channel is merged into the small river still retaining the name of the Yare, which, leaving the town of Yarmouth, to which it gave the appellation, has retreated to a distance of two miles, and now enters the country at the town of Gorleston. Having thus briefly explained the present features of the country, and the main evidences of the geographical changes it has undergone, let us proceed to a more immediate account of the venerable walls of Burgh.

Excepting the camp at Richborough, in Kent, the *Portus Rhutupis* of the Romans, which it also surpasses in remains, this camp at Burgh is the only specimen of this kind of Roman fortress existing in England. The earliest Anglo-Roman history respecting it begins and ends with the reign of Claudius. This emperor, who assumed the purple at the age of fifty, was the first successor to Julius Cæsar, who ventured to follow up the designs of this our arch-invasion, of reducing the island of Britain to the subjection of a Roman province. In pursuance of this he arrived here about the year A.D. 45, having previously despatched a brave general, Aulus Plautius, to facilitate his intention. The emperor remained six months, when he returned to Rome and held great triumphs. After his departure Plautius continued nearly four years, and carried on the Britannie war with spirit and success, and on his return was honoured with an ovation. His successor was the Pro Prætor Publius Ostorius Scapula, an officer in whom courage and skill were alike united. To him the Romans were indebted for the subjection of the Iceni, and retention of their conquests, and to him Gariannonum owes its existence. The erection of fortresses was particularly the policy of this commander; thereby he consolidated his own resources, and divided those of a restless enemy, and how well this plan succeeded Anglo-Roman history amply informs us.

In the construction of this camp, the Romans pursued their usual method of security, and practised their favourite military architecture: it formed an irregular parallelogram, the parallel sides of which were equally right lines, and equally long, but slightly rounded at the corners, in this latter respect differing from their general mode. Those camps were esteemed the most beautiful which were one-third longer than they were wide; here at Burgh the proportion is as two to one. The principal wall of this station, in which we find a central opening, formerly the position of the Porta Prætoris, the Prætor's, or Commander's Gate, is that to the east, six hundred and fifty feet long, fourteen high, and nine wide. The northern and southern walls are of the same dimensions, and exactly half the length. The western side has no remains of any wall, nor does it appear that it ever had any; certainly none of the same solidity as the other sides. Four massive round towers, at regular distances, defend the eastern wall, the northern and southern have also each one. The foundations on which this extent of heavy masonry is placed is a deep bed of chalk and lime, firmly compacted, and beaten down, the whole covered with a layer of earth and sand, so as to harden the mass and exclude the water. The next operation was a singular one, and,

perhaps, peculiar to this station, for the lowest foundation being thus formed, they covered it with oaken planks, two inches thick, the traces of which are perceptible to the present day. To these succeeded a bed of very coarse mortar, on which, in an irregular manner, were spread the first rough flints of the fabric. The mortar made use of by the Romans in general, and upon this occasion in particular, was composed of lime, and unrefined sand; from the pit at Belton, an adjacent village, they procured the former, and their sand-beach afforded an unlimited supply of the latter. This mortar was applied in two opposite modes, the one cold as we now use it, the other boiling hot, and by the proper admixture of both in the same building it became extremely hard and durable, and indissoluble in water for several days. After proceeding in the usual method with the cold mortar, at the end of every day's work they poured the hot fluid upon it, which immediately filled up the interstices, insinuating itself into every crevice, and combining the whole in one solid mass. To cover, probably, this uncouth aspect of unhewn flint and petrified streams of coarse mortar, they faced the front of the walls with alternate layers of flat brick and cut flint, as represented in the engraving, which gave a finish and beauty to the whole structure.

The Roman bricks made use of at Burgh are of a fine red colour and close texture, though probably of that sort called by the Romans *Crudus*, from being baked in the sun, as those which were burnt in the furnace were denominated *Coctus*. Their measurement answers exactly to the brick called by Pliny the Lydion, being a foot and half long, one foot broad, and an inch and half thick. It does not appear, however, that the Romans had any exact standard for the size of their bricks; in different stations their dimensions vary, nor have the ancients themselves determined it. The round towers were evidently an after erection, not being united to the walls at their base, and only by a small portion of masonry, which is inserted, as it were, into the wall at top. Their materials and facings are the same as the walls. These towers are solid, excepting a circular hole of two feet deep, and as many in diameter in the centre, which served probably for the admission of light temporary watch towers, or for the erection of standards and signals by which the garrison may have communicated with a summer camp, or *Castra Æstiva*, which is supposed to have existed at Caistor. The south tower has fallen down the steep bank which extends from the western side and still remaining almost entire, discovers by the broad hollow lines across it its peculiar foundation structure of oak planks. The north tower has also inclined a distance of six feet from the wall, bringing down a portion with it. The south-west corner of this station formed the Prætorium, being an elevation on which were pitched the tents of the commander and other officers. Such camps were usually divided into an upper and lower partition, the former as above described, the latter for the tents of the centurions and common soldiers. On the right of the Prætorium was the Quæstorium, for the Quæstor, or treasurer of the garrison; on the left the tents of the Legati, and between the two partitions were fixed the Principia, where their religious rites were celebrated, and the ensigns of the army deposited. This was the usual disposition of a camp, and we may conclude such an important one as Gariannonum did not materially differ.

The field adjoining the eastern wall was the place allotted for burial; here great numbers of Roman urns have been found, but neither the workmanship nor the materials have anything to recommend them;

they are of a coarse blue clay, brought from the neighbouring village of Bradwell, ill-formed, brittle, and porous. The easterly situation of this field corresponds with that of the Mons Esquilinus at Rome, a place assigned for the interment of the lower orders: the officers of the garrison might probably be buried within the area of the camp; and about forty years ago, on levelling part of the Prætorium, urns and ashes were discovered in great abundance.

In the area, and to some distance around, vast numbers of Roman coins have been, and still are, found; none as yet, however, rising higher than the reign of Domitian, and but rarely of any value in quality or design. Other relics, such as spear-heads, keys, rings, buckles, &c., the plough is continually turning up, but Roman altars or inscriptions have never appeared. The *Notitia Imperii*, a document containing a statistical list of the Roman stations in Britain, which has descended to our days, informs us that the troops who garrisoned this camp were a body of the Stablesian cavalry, under command of a Præpontus, who was particularly styled *Garrionensis*. The Roman troops in Britain consisted of five legions, which, with their foreign auxiliaries, amounted to seventy-two thousand foot and fourteen thousand horse, and these being distributed into about one hundred and fifty fortresses, the mean proportion of men to each is about one hundred horse, and four hundred and eighty or five hundred foot. Some stations could not accommodate so many, others would require more, and among these probably *Garrionum*. The whole area of the camp is raised several feet above the level without. Including the walls, it contains five acres, two roads, and twenty perches; the corn flourishes within this enclosure, and the harvest wagon now bears its reeling load through the once proud *Porta Prætoria*.

Thus stands the mighty skeleton through which the vital spirit of war, and all the busy passions of humanity once circulated, a structure which has stood the brunt of many thousand revolving seasons; which has seen the waves of the ocean replaced by fields green with pasture, and villages teeming with population;—which has outlived the lives of nations, the successive struggles of Roman, Saxon, Dane, and Norman;—which has witnessed the reign of chivalry, superstition, and ignorance, as now that of peace, commerce, and education;—which has, in a word, survived the crowding generations of eighteen centuries, and to all human foresight will survive as many more.

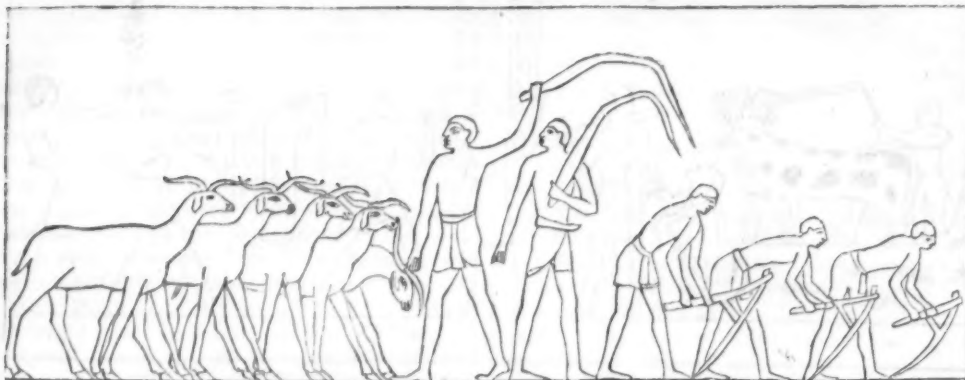
VALUE OF HEAT IN THE ECONOMY OF THE UNIVERSE.

IN the warm and temperate climates of the earth, its surface affords a delightful abode for man and inferior animals, supplying all their wants and desires; but where Winter comes with a temperature below the freezing point of water, the scene is entirely changed. Then the earth with its waters is soon bound up in snow and ice, the trees and shrubs become leafless, appearing everywhere like withered skeletons,—countless multitudes of living creatures, owing either to the bitter cold or deficiency of food, are perishing in the snows—nature seems dying or dead. The reverse change takes place when Spring returns, that is, when heat returns. The earth is again uncovered and soft, the rivers flow, the lakes are again liquid mirrors, the warm showers come to foster vegetation, which soon covers the ground with beauty and plenty. Man, lately inactive, is recalled to many duties; his water-wheels are everywhere at work, his boats are

again on the canals and streams, his busy fleets of industry are along the shores:—winged life in new multitudes fills the sky, finny life similarly fills the waters, and every spot of earth teems with vitality and joy. Many persons regard these changes of season as if they came like the successive positions of a turning wheel, of which one necessarily brings the next; not adverting that it is the single circumstance of change of temperature which effects all. But if the colds of Winter arrive too early, they unfailingly produce the wintry scene, and if warmth come before its time in Spring, it expands the bud and the blossom, which a return of frost will surely destroy. A seed sown in an ice-house never awakens to life.

Again, as regards climates;—the earthy matters forming the exterior of our globe, and therefore entering into the composition of soils, are not different for different latitudes; at the equator, for instance, and near the poles. That the aspect of nature then in the two situations, exhibits a contrast more striking still than between the annual Summer and Winter of one place, is owing merely to an inequality of temperature, which is permanent. Were it not for this, in both situations the same vegetables might grow, and the same animals might find their befitting support. But now, in the one, namely, where heat abounds, we see the magnificent scene of uninterrupted tropical fertility: the earth covered with luxuriant vegetation in endless variety, and even the hard rocks festooned with green, perhaps with the vine, rich in its purple clusters. In the midst of this scene, animal existence is equally abundant, and many of the species are of surpassing beauty—birds, for instance, with plumage as brilliant as the gayest flowers. The warm air is perfume from the spice-beds, the sky and clouds have often tints rivalling those of the rainbow, and happy human inhabitants call the scene a paradise.—Again, where heat is permanently absent, we have the dreary spectacle of polar barrenness, namely, bare rock or mountain, instead of fertile field; water every where hardened to solidity, no rain, nor cloud, nor dew, few motions but drifting snow; vegetable life scarcely existing, and then only in sheltered places facing the sun—and instead of the palms and other trees of India, whose single leaf is almost broad enough to cover a human dwelling, there are bushes and trees, as the furze and fir, having what may be called hairs or bristles in place of leaves. And in the Winter of these climates, during which the sun is not seen for nearly six months, new horrors are added, in the darkness and dreadful silence, the cold benumbing all life, and even freezing mercury—forming altogether a scene into which man may penetrate from happier climes, but where he can only leave his protecting ship and fires for short periods, as he might issue from a diving-bell at the bottom of the ocean. That in these now desolate regions, heat only is wanting to render them like the most favoured countries of the earth, is proved by the recent discoveries under-ground of the remnant of animals and vegetables formerly inhabiting them, and the same as now can live only near the equator. While Winter then, or the temporary absence of heat, may be called the sleep of nature, the more permanent torpor about the poles is like its death; and truly, therefore, may heat be considered as the life or soul of the universe! We may further reflect, that heat is the great agent in numberless important processes of chemistry and domestic economy, and the actuating principle of the mighty steam-engine, which now performs half the labour of society.

ILLUSTRATIONS OF THE BIBLE FROM THE MONUMENTS OF ANTIQUITY.



GOATHERDS AND THEIR FLOCK.

THE HAND-PLOUGH.

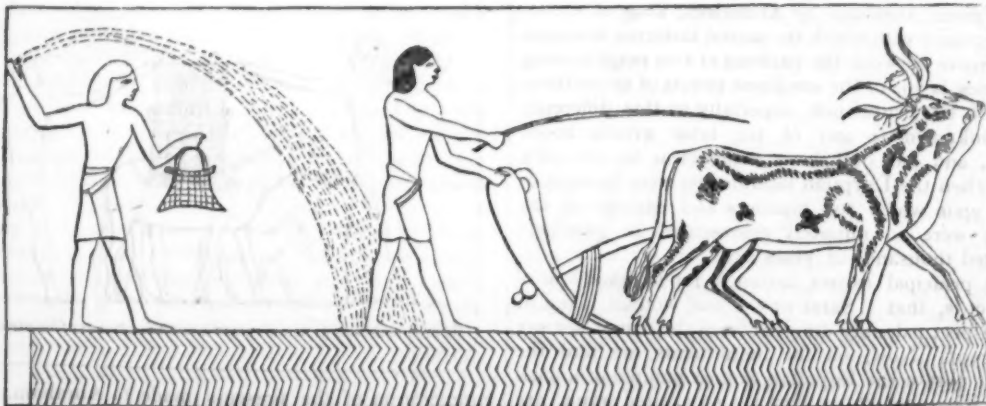
No. II. ABRAM'S VISIT TO EGYPT.

SOON after Abram had been called by God out of his father's land, he was compelled by the pressure of a severe famine to abandon Canaan for a season and take up his abode in Egypt. The brief narrative of this event is singularly confirmed and illustrated by the monuments. "And there was a famine in the land, (of Canaan,) and Abram went down to Egypt to sojourn there, for the famine was grievous in the land (of Canaan.) Gen. xii. 10. From this verse it appears that agriculture had attained so high a degree of perfection among the Egyptians in the days of Abram, that foreigners came thither from other lands in seasons of distress, with almost a certainty of finding abundance. All the details of Egyptian husbandry are depicted on the monuments, and they fully prove the extraordinary fertility of the soil, and the skill and industry with which the Egyptian agriculturists profited by the bounties of nature. When the land was thoroughly saturated by the overflowing of the Nile, it was ready to receive the seed without any further preparation. The plough was chiefly used to scratch the earth over the seed, it was consequently very simple in its construction, and generally destitute of a metal share. We find the hand-plough commonly used, it resembles the first letter of the alphabet in shape, and probably suggested that letter's form.

When drawn by a yoke of oxen, handles and traces are added to it. We say "oxen," because neither in the Bible nor on the monuments do we find horses used in agricultural operations, although they were employed to draw the chariots of warriors and princes. The oxen seem to have been very carefully trained; in almost every figure the artist contrives to point

attention to their docility, and to the perfect control which the driver had over them; they were ruled by a goad not by a whip, a circumstance which tends to illustrate an event recorded in another part of Scripture, "Shamgar the son of Anath slew six hundred Philistines with an ox-goad; he also delivered Israel." (Judges iii. 31.) Other animals were managed with a leather whip or thong, similar to the cow-skin used in the West Indies, which is supposed to have been formed of the hide of the hippopotamus. The herdsmen who are directing the flock of goats in the above engraving are thus armed. The plough was not driven deep; we see no marks of its turning up a furrow; the waved lines in the following cut are designed to exhibit the effects of irrigation not of the plough.

The interval between seed-time and harvest was shorter than in our climate, and the return of grain more abundant. So rich was the crop that the reapers usually cut off nothing but the ears, leaving the straw standing. The ears of corn were then carried in baskets to the threshing-floor, which seems always to have been a remarkable place in every nome or district, and the corn was then trodden out by oxen, a circumstance to which frequent allusions are made in Scripture, for instance, one of the Mosaic injunctions is, "Thou shalt not muzzle the ox which treadeth out the corn." Great care was requisite in preparing the floor for this mode of threshing; it was levelled and made smooth, a hard clay was trampled and beaten into it to give it proper firmness, and hence we find a threshing-floor frequently mentioned in Scripture as a locality generally marked and known. Thus, in the account of Uzzah's being struck dead for presumptuously laying hand on the ark, we are told that the event occurred when they



THE SOWER.

PLOUGHING WITH OXEN.



CARRYING, AND TREADING OUT THE CORN.

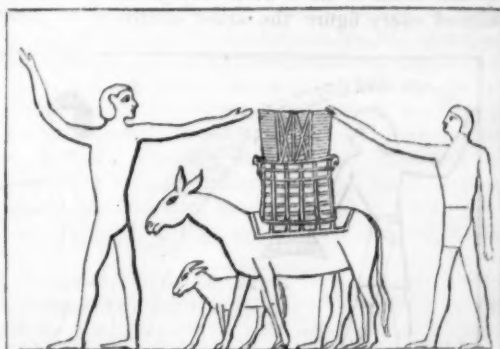
came "to Nachon's threshing-floor." (1 Kings vi. 6.) In the accompanying cut we see that the Egyptian threshing-floor was raised a little above the surface of the ground, and the number of oxen employed gives sufficient evidence of the abundance of the crop. It deserves also to be remarked that the oxen appear to be unmuzzled, as if the Egyptians thought it right that the animals should share in the joy of the harvest.

Let us now resume the narrative of Abram's journey. "And it came to pass that when Abram was come into Egypt, the Egyptians beheld the woman (Sarai) that she was very fair. The princes also of Pharaoh's house saw her, and commended her before Pharaoh; and the woman was taken into Pharaoh's house." (Gen. xii. 14, 15.) Abram had foreseen this danger, and warned Sarai to call herself his sister; but we find that he used no such precaution in Canaan, though it was a less civilized country, and some of its inhabitants at least, notorious for their immorality. Hence, we are led to conclude, that the treatment of women in Egypt, was different from that which prevailed in other eastern countries. Now this is fully confirmed by the monuments. The Egyptian women, instead of being kept in the state of seclusion usual among the Syrians and Persians, enjoyed as much freedom as the ladies of modern Europe. They went about unveiled, and so far were they from hiding their faces or persons, that they rather ostentatiously displayed both. Indeed, their muslin vestures are represented as of so fine a texture, that the limbs shine through them, and they appear like what they were once designated, "woven hair." Sarai, therefore, when she conformed to the customs of the country, exposed herself to be seen by the Egyptian princes; but this circumstance does not occur when she was taken from Abraham by Abimelech, king of Gerar. The accuracy with which the sacred historian describes a difference between the customs of two neighbouring countries, is one of the strongest proofs of the authenticity of the Pentateuch; especially as this difference was unknown to any of the later writers about Egypt, and has only been made clear in our own days, when the Egyptian monuments were brought to light, upon which the manners and customs of the people were so minutely represented in paintings executed thousands of years ago.

The principal causes assigned for Pharaoh's misconduct is, that "Sarai was a fair woman," and in this respect palpably different from the rest of her sex in Egypt. Now, on the monuments, we find the greater part of the Egyptian women painted of a dark red colour, but those who are of exalted rank, are usually of a lighter tint, and a few who seem to be

queens, or ladies of high rank, are depicted in a yellowish-white shade. It does not appear that this difference of colour between the Egyptians and the Syrians has been noticed by any ancient writer except Moses, and in this minute particular, we find his description supported by the independent and unsuspecting testimony of the monuments, and, consequently, a decisive proof afforded us of the accuracy of the history recorded in the Pentateuch.

The riches which Abram acquired in Egypt next demand our attention. We are told that when the reigning Pharaoh took Sarai, "he entreated Abram well for her sake; and he had sheep, and oxen, and he-asses, and men-servants, and maid-servants, and she-asses, and camels." (Gen. xii. 16.) The first thing that strikes us in this enumeration is, that there is no mention of horses; the monuments assign the reason, by showing us, that horses were reserved exclusively for the war-cars and triumphal chariots; they belong to the breed which is still celebrated in Dongola, and which appears never to have been indigenous in the lower valley of the Nile. Asses have always been favourite animals with the Egyptians; there are stands of them now in Cairo, like the stands of the common hackney-carriages in Europe, and for the same purpose, namely, the conveyance of passengers. Some of these are of a superior breed, unlike the degraded animals we are accustomed to see in this country; many even prefer them to horses, and hence we see the propriety of Deborah's mentioning it as a mark of distinction, that the rulers of Israel "rode upon white asses." (Judges v. 10.) The she-asses were principally used as beasts of burden, and on this account they are mentioned specially in the



Representation of the she-ass used as a beast of burden

enumeration of the presents made to Abraham. It is gratifying to find that the propriety even of this

apparently minute distinction, is confirmed by the monuments.

There is abundant proof that domestic slavery was established in Egypt from the earliest times. In fact, the monuments exhibit many scenes of wholesale traffic in human beings. Now, in the presents made to Abram on other occasions we find no mention of male or female slaves, but when the historian describes the reigning Pharaoh's gifts, we find him specially mentioning the domestic servants, and this gives us another of those evidences of truth which at once bring conviction to the mind, because it is impossible that they could ever be counterfeited. Finally, camels are the last enumerated. It strikes most observers as a singular fact that the camel is so very rarely found on the monuments that at one time it was believed never to have been represented. Recent travellers, however, have found one or two portraits of this useful animal, but generally the camel seems to have been undervalued by the ancient Egyptians. An obvious reason for this is, that the camel was of little use to an agricultural people, leading a stationary life in the valley of the Nile, while it was of the highest value to the several wandering tribes on their frontiers. The fact that the camel does occur on the monuments, fully supports the veracity of the sacred historian in reckoning it among the gifts made by the Pharaoh to Abraham, and the fact of its rarely occurring gives us the reason why it is placed last in the enumeration.

When Abram left Egypt, we are told that he was "very rich in cattle, in silver, and in gold." (Gen. xiii. 2.) This specific mention of the precious metals is justified by the recent proofs of the great commercial prosperity of ancient Egypt, and of the abundance of gold and silver both in the shape of ring-money and of ornaments, which we find depicted on the monuments. Among the persons whom Abraham brought up with him was a female servant, or slave, probably a gift from the reigning Pharaoh, named Hagar, who subsequently became the mother of Ishmael. The harsh treatment to which she was subjected by Sarah, when in the exultation of having such an advantage as fruitfulness over her mistress, she forgot to render her due obedience, is elucidated by many examples of the power which the principal wife had over the female attendants. We see the female domestics on the monuments trembling before their mistresses, when they appear to have incurred blame; and we find many representations which sufficiently prove that the authority exercised by the mistress of a mansion was perfectly despotic, extending even to life and limb. Hagar must have felt the weight of her mistress's displeasure severely, when she sought shelter in the wilderness. "And when Sarai dealt hardly with her, she fled before her face." (Gen. xvi. 6.) When Hagar was subsequently expelled, together with her son, we find that she educated the boy in the habits of her country: it is recorded, "he became an archer," (Gen. xxii. 20,) and the monuments show us that practising the bow was generally a part of the education of an Egyptian youth. Hagar's attachment to her nation is further proved by her having taken a wife for Ishmael "out of the land of Egypt." (Gen. xxii. 21.)

After the death of Sarah, Abraham purchased a piece of ground for a sepulchre from the children of Heth. The price was paid by weight; and we find that this was also the custom in Egypt, and that in consequence, they paid great attention to the construction of the balance. Another memorial of Abraham's visit to Egypt appears in the account of his steward's mission to procure a wife for Isaac. He presented to Rebekah "a golden ear-ring of half a

shekel weight, and two bracelets for her hands of ten shekels weight." (Gen. xxiv. 22.) The progress which the Egyptians made in the arts of the jeweller and the goldsmith, is proved not merely by their representations on the monuments, but by the discovery of the articles themselves in the recently-opened tombs. Specimens of these may be seen in the principal museums of Europe; a very beautiful collection of such ornaments, belonging to Signor Giovanni d'Athanasios was recently exhibited in London, and no one could visit it without feeling convinced that the sacred historian correctly described the use of these articles, in an age when infidels have pretended that they were unused and unknown.

ON THE STUDY OF ASTRONOMY.

SCIENCE, regarded as the pursuit of truth, must ever afford occupation of consummate interest, and subject of elevated meditation. The contemplation of the works of creation elevates the mind to the admiration of whatever is great and noble, accomplishing the object of all study, which, in the elegant language of Sir James Mackintosh, "is to inspire the love of truth, of wisdom, of beauty,—especially of goodness, the highest beauty,—and of that supreme and eternal mind, which contains all truth and wisdom, all beauty and goodness. By the love of delightful contemplation and pursuit of these transcendent aims, for their own sake only, the mind of man is raised from low and perishable objects, and prepared for those high destinies which are appointed for all those who are capable of them."

In tracing the connexion of the physical sciences, Astronomy affords the most extensive example of their union. In it are combined the sciences of number and quantity, of rest and motion. In it we perceive the operation of a force which is mixed up with everything that exists in the heavens or on earth; which pervades every atom, rules the motions of animate and inanimate beings, and is as sensible in the descent of a rain-drop as in the Falls of Niagara, in the weight of the air, as in the periods of the moon.

The heavens afford the most sublime subject of study which can be derived from science. The magnitude and splendour of the objects, the inconceivable rapidity with which they move, and the enormous distances between them, impress the mind with some notion of the energy which maintains them in their motions, with a durability to which we can see no limit. Equally conspicuous is the goodness of the great First Cause, in having endowed man with faculties by which he can not only appreciate the magnificence of His works, but trace with precision the operation of His laws, use the globe he inhabits as a base wherewith to measure the magnitude and distance of the sun and planets, and make the diameter of the earth's orbit the first step of a scale by which he may ascend to the starry firmament. Such pursuits, while they ennoble the mind, at the same time inculcate humility, by showing that there is a barrier which no energy, mental or physical, can ever enable us to pass; that, however profoundly we may penetrate the depths of space, there still remain innumerable systems, compared with which, those apparently so vast must dwindle into insignificance, or even become invisible; and that not only man, but the globe he inhabits, nay, the whole system of which it forms so small a part, might be annihilated, and its extension be unperceived in the immensity of creation.

—MRS. SOMERVILLE'S *Connexion of the Sciences*.

A WONDERFUL CHILD.

RICHARD, SON OF JOHN EVELYN.

OF John Evelyn's children, one son, who died at the age of five, was almost a prodigy. The particulars of his extraordinary endowments, and the deep and striking manner in which his admirable parent was affected by his death, may be seen in his *Memoirs and Correspondence*. The following are the notices of this wonderful child:—

1652. 24 Aug. My first child, a sonn, was born precisely at one o'clock. Sept. 2, Mr. Owen, the sequestered divine of Eltham, christened my sonn by the name of Richard.

1657-8. 27 Jan. After six fits of quartan ague, with which it pleased God to visite him, died my deare sonn, Richard, to our inexpressible grieve and affliction, five yeares and three days old onely, but at that tender age a prodigy for witt and understanding; for beauty of body a very angel; for endowment of mind, of incredible and rare hopes. To give onely a little taste of them, and thereby glory to God, sense of God: he had learned all his catechisms who out of the mouths of babes and infants does sometimes perfect his praises; at two yeares and a halfe old he could perfectly reade any of y^e English, Latine, French, or Gothic letters, pronouncing the three first languages exactly. He had before the fifth yeare, or in that yeare, not onely skill to reade most written hands, but to decline all the nouns, conjugate the verbs regular, and most of y^e irregular: learn'd out "*Puerilis*," got by heart almost y^e entire vocabularie of Latine and French primitives and words, could make congruous syntax, turne English into Latine, and vice versa, construe and prove what he read, and did the government and use of relatives, verbs, substantives, elipses, and many figures and tropes, and made a considerable progress in Comenius's *Janua*; began himself to write legibly, and had a stronge passion for Greeke. The number of verses he could recite was prodigious, and what he remembered of the parts of playes, which he would also act; and when seeing a Plautus in one's hand, he asked what booke it was, and being told that it was a comedy, and too difficult for him, he wept for sorrow. Strange was his apt and ingenious application of fables and morals, for he had read *Æsop*; he had a wonderful disposition to mathematics, having by heart divers propositions of Euclid, that were read to him in play, and he would make lines, and demonstrate them. As to his piety, astonishing were his applications of Scripture upon occasion, and his early understanding of the historical part of y^e Bible and New Testament, to a wonder, and how Christ came to redeem mankind, and how comprehending these necessaries himselfe, his godfathers were discharged of their promise. These, and the like illuminations, far exceeding his age and experience, considering the prettinesse of his address and behaviour, cannot but leave impressions in me at the memory of him.

When one told him how many dayes a Quaker had fasted, he replied, That was no wonder, for Christ had said, that man should not live by bread alone, but by y^e word of God. He would of himself select y^e most pathetic psalms, and chapters out of Job, to roade to his mayde during his sicknesse, telling her, when she pitied him, that all God's children must suffer affliction. He declaimed against y^e vanities of the world before he had seene any.

Often he would desire those who came to see him to pray by him, and a yeare before he fell sick, to kneel and pray with him alone in some corner. How thankfully would he receive admonition, how soone he reconciled! how indifferent, yet continually cheerful! He would give grave advice to his brother John, beare with his impertinencies, and say he was but a child.

If he heard of, or saw any new thing, he was unquiet till he was told how it was made; he brought to us all such difficulties as he found in books, to be expounded. He had learn'd by heart divers sentences in Latine and Greeke, which on occasion he would produce even to wonder. He was all life, all prettinesse, far from morose, sullen, or childish in anything he said or did. The last time he had been at church (which was at Greenwich), I asked him, according to custome, what he remembered of y^e sermon; "Two good things, Father," said he, "*bonum oratio*, and *bonum gloria*," with a just account of what y^e preacher said.

The day before he died, he call'd to me, and in a more serious manner than usual, told me that for all I loved him so dearly, I should give my house, land, and all my fine things, to his brother Jack; he should have none of them; and next morning, when he found himself ill, and that I perswaded him to keep his hands in bed, he demanded whether he might pray to God with his hands unjoyn'd; and a little after, whilst in greate agonie, 'whether he should not offend God by using his holy name so often calling for ease?'

What shall I say of his frequent pathetical ejaculations, uttered of himselfe, "Sweete Jesus, save me, deliver me, pardon my sinns, let thine angels receive me!" So early knowledge, so much piety and affection! But thus God, having dressed up a saint fit for himselfe, would not longer permit him with us, unworthy of y^e fruites of this incomparable hopefull blossome. Such a child I never saw: for such a child I beseech God, in whose bosom he is! May I and mine become as this little child, who now follows the child Jesus, that Lamb of God, in a white robe whithersoever he goes. Even so, Lord Jesus, *fiat voluntas tua*! Thou gavest him to us, thou hast taken him away from us. Blessed be the name of the Lord! That I had anything acceptable to Thee was from thy grace alone, since from me he had nothing but sin; but that thou hast pardon'd! blessed be my God for ever! Amen.

In my opinion he was suffocated by y^e women and maids that tended him, and cover'd him too hot with blankets as he lay in a cradle, near an excessive hot fire, in a close roome. I suffer'd him to be open'd, when they found that he was what is vulgarly called liver-growne. I caus'd his body to be coffin'd in lead, and deposited on the 30th, at eight o'clock that night, in the church at Deptford, accompanied with divers of my relations and neighbours, among whom I distributed rings with this motto, *Dominus abstulit*; intending, God willing, to have him transported with my owne body, to be interred at our dormitory in Wotton Church, in my dear native county of Surrey, and to lay my bones and mingle my dust with my fathers, if God be gracious to me, and make me as fit for him as this blessed child was. The Lord Jesus sanctify this and all other my afflictions. Amen! Here ends the joy of my life, and for which I go even mourning to my grave.

In the Preface to Mr. Evelyn's *Translation of the Golden Book of St. Chrysostom*, concerning the education of children, is likewise given a very interesting account of this amiable and promising child. In the second volume of the *Memoirs and Correspondence*, are two letters occasioned by his death. One of these, from Dr. Jeremy Taylor, which appeared in the *Saturday Magazine*†, is a beautiful specimen of the language used by one learned and pious man to another, on an occasion in which the sympathy of friends, next to religious consolation, is most soothing to the feelings. Evelyn's mind was remarkably calculated for the endurance of such trials; and his Christian faith and resignation were soon again put to the test. It was only a few weeks after the above event, that the following entry was made in his diary.

Feb. 15.—The afflicting hand of God being still upon us, it pleased Him also to take away from us this morning my youngest sonn, George, now seven weeks languishing at nurse, breeding teeth, and ending in a dropsie. God's holy will be done! He was buried in Deptford Church y^e 17th following.

25.—Came Dr. Jeremy Taylor, and my brothers with other friends, to visite and condole with us.

M.

* Thy will be done!

† The Lord hath taken away.

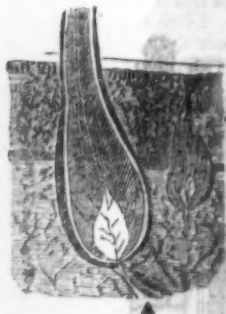
‡ See *Saturday Magazine*, Vol. II., p. 223.

THE last duty of parents to their children is that of giving them an education suitable to their station in life; a duty pointed out by reason, and of the greatest importance of any. For, as Puffendorf very justly observes, it is not easy to imagine or allow, that a parent has conferred any considerable benefit on his child by bringing him into the world, if he afterwards entirely neglects his culture and education, and suffers him to grow up like a beast, to lead a life useless to others and shameful to himself.—BLACKSTONE.

THE GROWTH OF HAIR.

How many beautiful illustrations of the wisdom and kindness of the Creator, may be gathered from the numerous facts which reach our knowledge during the study of anatomy, either human or comparative! We constantly find that every care has been taken to impart sensibility to those parts of the body which are liable to injury, while the portions which, from their position, are placed out of the reach of ordinary accidents, are free from the sense of pain when touched or cut. The heart is insensible, and although the nerves feel acutely injuries of every description, near their extremities at the surface of the skin; the same conductors of sensation are insensible to wounds in those portions which are more deeply seated. The tendinous parts of the muscles feel nothing from incised wounds, but they are acutely sensible to effects of a strain, as most of us have experienced. These facts, singular as they are, are not founded on assumption, but firmly based on the result of many experiments, performed by the most skilful hands, all announcing the bounty, as well as the love of the Maker. The growth of the hair and the nails is one illustration of this subject. If these parts of our structure were sensible to pain, we should be in a constant state of misery, either real or anticipated, as it is we can as freely part with as much of either as fashion or comfort may require.

The annexed engraving is a highly-magnified representation of a section of the root of the human hair. It originates immediately below the true skin, receiving its nourishment from the body at A. The lower part of the bulb is the only living part of the hair, and the portion which appears through the skin consists of dead portions, thrown off, as it were, from the living mass, and forced upwards. On the right hand of the engraving is shown the appearance of a



hair before it comes through the skin. The hair itself is hollow, and its colour arises from a dark-coloured substance which is gradually deposited by the root. From old age, chiefly, but, at times, from other causes, the root is unable to perform this function, and the hair becomes gray; at last the root itself is dried up, and the hair falls off.

CONVERSATION.

WITH some persons conversation is nothing but a string of stories. Now, though nothing enlivens conversation more than apt anecdotes, a continual succession of them is cloying, and the misfortune is, that anecdote-mongers are but too apt to repeat the same on every occasion. It is a curious matter of observation, how very seldom people change their illustrative stories, so that amongst those who live very much with one another, the same story is expected on the same occasion, as much as the known songs of a gentleman singer.

So treacherous is the memory of some story-tellers, that they have been known to tell the same story, in the same words, to the same person,—even to him who had before imparted it in the course of the same evening.

The *Connoisseur* calls old story-tellers the cuckoos of conversation. Some watch for an opportunity to introduce a favourite story; some bring it in without

any regard to the subject on the tapis. Others are so economical of their stories, as to whisper them first to their neighbours, till they have excited a fit of laughter, in which the rest of the company wish to partake. Certainly—

A story in which native humour reigns,
Is often useful, always entertains:
A graver fact enlisted on your side
May furnish illustration well applied;
But sedentary weavers of long tales
Give me the fidgets, and my patience fails;
'Tis the most assinine employ on earth,
To hear them tell of parentage and birth,
And echo conversation dull and dry,
Embellished with—'He said,'—and, 'So said I!'
At every interview, their route the same,
The repetition makes attention lame;
We bustle up with unsuccessful speed,
And in the saddest part cry, 'Droll indeed!'

Many wits have been known to prime themselves with stories for the party they were going to join.

A gentleman called on Wilkes, and not finding him at home, sat down to wait his return, and, to amuse himself in the interim, took up a French book of anecdotes, many of which he observed were marked. Mr. Wilkes did not come back, as was expected, and the gentleman went away. He met Wilkes, however, with some common friends at dinner, and, to his great amusement, heard all the anecdotes, which he observed marked in the book, most ingeniously introduced in the course of the evening.—*Essays, on Conversation and on Quackery.*

THE SCEPTIC.

Oh! lives there, heaven! beneath thy dread expanse,
One hopeless, dark idolater of chance,
Content to feed with pleasures unrefined,
The lukewarm passions of a lowly mind;
Who mouldering earthward, 'reft of every truth,
In joyless union wedded to the dust,
Could all his parting energy dismiss,
And call this barren world sufficient bliss?—
There live, alas! of heaven-directed mien,
Of cultured soul, and sapient eye serene,
Who hail thee, Man! the pilgrim of a day,
Spouse of the worm, and brother of the clay,
Frail as the leaf in Autumn's yellow bower,
A friendless slave, a child without a sire,
Whose mortal life and momentary fire
Lights to the grave, his chance-created form,
As ocean-wrecks illuminate the storm,
And, when the gun's tremendous flash is o'er,
To night and silence sink for evermore!
Are these the pompous tidings ye proclaim,
Lights of the world, and demi-gods of Fame?
Is this your triumph—this your proud applause,
Children of Truth, and champions of her cause?
For this hath science searched, on weary wing,
By shore and sea—each mute and living thing,
Launched with Iberia's pilot from the steep,
To worlds unknown, and isles beyond the deep;
Or round the cope her living chariot driven,
And wheeled in triumph through the signs of heaven.
Oh! star-eyed science, hast thou wandered there
To waft us home the message of despair?
Then bind the palm, thy sage's brow to suit,
Of blasted leaf, and death distilling fruit!
Ah me! the laurelled wreath that murder rears,
Blood-nursed, and watered by the widow's tears,
Seems not so foul, so tainted, and so dread,
As waves the night-shade round the sceptic head.

CAMPBELL'S *Pleasures of Hope.*

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